भारतीय मानक
Indian Standard

IS 212 : 2021

सामान्य उपयोग हेतु क्रूड कोल तार

(तीसरा पुनरीक्षण)

Crude Coal Tar for General Use

(Third Revision)

ICS 75.140

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भारतीय मानक ब्यूरो
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February 2021 **Price Group 2**

Solid Mineral Fuels and Solid Biofuels Sectional Committee, PCD 07

FOREWORD

This Indian Standard (Third Revision) was adopted by Bureau of Indian Standards after the draft finalized by the Solid Mineral Fuels and Solid Biofuels Sectional Committee had been approved by the Petroleum, Coal and Related Products Division Council.

This Standard was first published in 1950 for the guidance of distillers of crude tar as well as for direct consumers, who use it for sundry purposes such as, treatment of wooden poles and sleepers, toilet walls, fishing nets etc. After the publication of IS 1201 to 1220 : 1958, this standard was revised in 1961, wherein reference to these test methods was included.

In the second revision, the water content requirements of crude coal tar were modified and the general characteristics of its fractional distillation were specified and the viscosity requirement was also included besides references to the latest version of the Indian Standards on methods of test, namely IS 1201 to 1220 : 1978.

In this revision, reference has been made to the latest version of the Indian Standard on glossary of terms namely, IS 334 : 2002. In the formulation of this standard due weightage has been given to international co-ordination among the standards and practices prevailing in different countries in addition to relating it to the practices in the field in this country.

The composition of the Technical Committee responsible for the formulation of this Indian Standard is given at Annex A.

For the purpose of deciding whether a particular requirement of this standard is complied with the final value, observed or calculated, expressing the result of a test or analysis shall be rounded off in accordance with IS 2 : 1960 ‘Rules for rounding off numerical values (*revised*)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

CRUDE COAL TAR FOR GENERAL USE

(Third Revision)

1 SCOPE

This standard prescribes the requirements and the methods of sampling and tests for crude coal tar used for general purposes, such as treatment of wooden poles and sleepers, toilet walls, fishing nets, etc.

2 REFERENCES

The following standards contain provisions, which through reference in this text constitute provision of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent edition of the standards indicated below:

IS No.	*Title*
334 : 2002	Glossary of terms relating to bitumen and tar (*third revision*)
1201 : 2004	Methods for testing tar and bituminous materials: Sampling (*first revision*)
1202 : 1978	Methods for testing tar and bituminous materials: Determination of specific gravity (*first revision*)
1206 (Part 3) : 1978	Methods for testing tar and bituminous materials: Determination of viscosity: Part 3 Kinematic viscosity (*first revision*)
1211 : 1978	Methods for testing tar and bituminous materials: Determination of water content (Dean and Stark method) (*first revision*)
1213 : 1978	Methods for testing tar and bituminous materials: Distillation test (*first revision*)
1214 : 1978	Methods for testing tar and bituminous materials: Determination of matter insoluble in benzene (*first revision*)
1217 : 1978	Methods for testing tar and bituminous materials: Determination of mineral matter (Ash) (*first revision*)

3 TERMINOLOGY

For the purpose of this standard, the definitions given in IS 334 shall apply.

4 REQUIREMENTS

4.1 Composition

Crude coal tar shall be obtained as a by-product of destructive distillation of coal.

4.1.1 The material shall comply with the requirements prescribed in Table 1.

5 TESTS

The material shall be tested in accordance with the appropriate Indian Standard referred to in 5 of Table 1.

6 SAMPLING AND CRITERIA FOR CONFORMITY

6.1 Lot

In any consignment, all the containers of crude coal tar from the same batch of manufacture shall be grouped together to constitute a lot.

6.2 The number of containers to be selected at random from the lot shall depend on the size of the lot and shall be in accordance with Table 2.

6.3 From each of the containers selected as in **6.2**, an average sample representative of the material in the container shall be drawn m accordance with method prescribed in IS 1201 taking all the precautions mentioned therein. All those samples from individual containers shall be stored separately.

6.4 Number of Tests

6.4.1 All the individual samples shall be tested for water, mineral matter (ash) and viscosity.

6.4.2 For distillation and other requirements, a composite sample prepared by mixing together equal quantities of crude coal tar from all the individual samples shall be tested.

Table 1 Requirements of Crude Coal Tar

(*Clauses* 4.1.1 *and* 5)

Sl No.	Characteristics	Min	Max	Reference to Indian Standard, Method of Test
(1)	(2)	(3)	(4)	(5)
i)	Specific gravity (27 °C/27 °C)	1.09	1.24	IS 1202
ii)	Water content, percent by weight	–	4	IS 1211
iii)	Viscosity (4 mm at 30 °C, s)	30	100	IS 1206 (Part 3)
iv)	Distillation fractions, percent (*w/w*)			IS 1213
	up to 200 °C	–	4	
	200 to 230 °C	2	10	
	230 to 270 °C	6	12	
	270 to 300 °C	4	7	
	300 to 350 °C	12	17	
v)	Mineral matter (Ash) percent (*w/w*)	0	1	IS 1217
vi)	Matter insoluble in benzene, percent by weight	5	25	IS 1214

Table 2 Number of Containers to be Selected

(*Clause* 6.2)

Sl No.	*Lot size*	*No. of Containers*
1	1	1
2	2-15	2
3	16-50	3
4	51-150	5
5	151-500	8
6	501 and above	13

6.5 Criteria for Conformity

6.5.1 The lot shall be considered as conforming to the requirements of the specification if the conditions mentioned in **6.5.2** and **6.5.3** are satisfied.

6.5.2 From the test results for water, mineral matter (ash) and viscosity, the mean ($\bar{X}$) and range (R) shall be calculated. The following conditions shall satisfy:

a) ($\bar{X}$ – 0.6 R) shall be greater than or equal to the minimum specified limit, and

b) ($\bar{X}$) + 0.6 R) shall be less than or equal to the maximum specified limit.

6.5.3 The composite sample when tested for distillation and other requirements shall satisfy the corresponding requirements of the characteristics.

7 MARKING

7.1 Each container shall be legibly and indelibly marked with the following:

a) Manufacturer’s name and trade-mark,

b) Month and year of manufacture, and

c) Batch number.

7.2 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act*, 2016 and the Rules and Regulations framed thereunder, and the products may be marked with the Standard Mark.

ANNEX A

(*Foreword*)

COMMITTEE COMPOSITION

Solid Mineral Fuels and Solid Biofuels Sectional Committee, PCD 07

Organization	*Representative(s)*
CSIR Central Institute for Mining and Fuel Research (CSIR-CIMFR), Dhanbad	Dr Pradeep Kumar Singh (***Chairman***) Shri T. B. Das (*Principal Member*)
Central Mine Planning & Design Institute Limited (CMPDI), Ranchi	Shri N. Ramakrishan
Central Pollution Control Board (CPCB), Delhi	Shri Nazimuddin
Central Revenue Control Laboratory (CRCL), Delhi	Dr T. A. Sreenivasa Rao
Coal India Limited (CIL), Kolkata	Shri Debasish Guha
Geological Survey of India (GSI), Kolkata	Shri Biswajit Gangopadhyay
Indian Metals & Ferro Alloys Limited (IMFA), Bhubaneswar	Shri D. K. Mohanty
Indian School of Mines (ISM)	Dr S. Bhattacharya
National Council for Cement & Building Materials (NCCBM), Faridabad	Shri Ankur Mittal
Neyveli Lignite Corporation Limited (NLC Ltd), Neyveli	Shri V. Manoharan
Northern Coalfields Limited (NCL), Singrauli	Shri Satish Jha
Singareni Collieries Co Limited (SCCL), Kothagudem	Shri G. Rajender Reddy
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Bharat Coking Coal Limited (BCCL), Dhanbad	Shri V. K. Jha Shri J. Dutta (*Alternate*)
Bharat Heavy Electrical Limited (BHEL), New Delhi	Shri R. Elankovan Shri Ganesh Palappan (*Alternate*)
Cement Manufacturer’s Association (CMA), Delhi	Shri K. V. Reddy Shri Sanjay Jain (*Alternate* I) Shri Vaibhav Gupta (*Alternate* II)
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Coal Controller Organization, Kolkata	Shri Anjani Kumar Shri Subhasis Sahu (*Alternate*)
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CSIR National Metallurgical Laboratory (CSIR-NML), Jamshedpur	Dr Sanchita Chakravarty Shrimati Rupa Das Biswas (*Alternate*)
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Organization	*Representative(s)*
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Ministry of Coal, Department of Coal, Delhi	Shri Anindya Sinha Shri Piyush (*Alternate*)
Personal Capacity, Kolkata	Dr Kalyan Sen
Personal Capacity, Delhi	Shri S. K. Grover
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The Energy and Resources Institute (TERI), Delhi	Shri Sunil Dhingra Shri N. K. Ram (*Alternate*)
BIS Directorate General	Shri V. K. Diundi Scientist 'G' and Head (PCD) [Representing Director General (*Ex-officio*)]

Member Secretary

Shrimati Nisha Bura
Scientist 'D' (PCD), BIS

Bureau of Indian Standards

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Amendments Issued Since Publication

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